Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1-76. (Cancelled)

- 77. (Currently Amended) A method of maskless lithographic pattern generation using an array of exposure cells, wherein at least one of the exposure cells exposes separate areas of a surface to be exposed, wherein the exposure cells have a thickness of less than about 50 microns, and wherein the exposure cells are capable of independent simultaneous operation.
- 78. (Previously Presented) The method of claim 77, wherein a substantial portion of the separate areas are exposed simultaneously.
- 79. (Previously Presented) The method of claim 77, further comprising moving through a sequence of horizontal and vertical motions at least one of the array of exposure cells and the surface to be exposed.
- 80. (Previously Presented) The method of claim 77, further comprising aligning by electro-magnetic coupling the array of exposure cells and the surface to be exposed.
- 81. (Previously Presented) The method of claim 77, wherein each exposure cell is selected from the group consisting of a radiation source cell or a shuttered cell.
- 82. (Previously Presented) The method of claim 77, wherein the shutter of a shuttered cell is used to vary operation of the exposure cell.
- 83. (Previously Presented) The method of claim 77, wherein radiation from a radiation source cell is selected from

the group consisting of electrons, protons, X-ray, UV or optical.

84. (Currently Amended) A method of maskless lithographic pattern generation, the method comprising:

providing an array of exposure cells <u>formed</u> on a substrate, wherein <u>at least one of</u> the exposure cells exposes separate areas of a surface to be exposed, wherein a major portion of the substrate has a thickness of less than about 50 microns, and wherein the exposure cells are capable of independent simultaneous operation; and

providing a stress-controlled low stress and elastic dielectric layer on the substrate.

- 85. (Previously Presented) The method of claim 84, wherein a substantial portion of the separate areas are exposed simultaneously.
- 86. (Previously Presented) The method of claim 84, further comprising moving through a sequence of horizontal and vertical motions at least one of the array of exposure cells and the surface to be exposed.
- 87. (Previously Presented) The method of claim 84, further comprising aligning by electro-magnetic coupling the array of exposure cells and the surface to be exposed.
- 88. (Currently Amended) The method of claim 84, wherein each exposure cell is selected from the group consisting of a radiation source cell [[or]] and a shuttered cell.
- 89. (Previously Presented) The method of claim 84, wherein the shutter of a shuttered cell is used to vary operation of the exposure cell.
- 90. (Previously Presented) The method of claim 84, wherein radiation from a radiation source cell is selected from

the group consisting of electrons, protons, X-ray, UV or optical.

- 91. (Currently Amended) The method of claim 84, wherein at least one of the following conditions is true: (1) the stress of the stress-controlled low stress and elastic dielectric layer is less than about 8 x 108 dynes/cm²; (2) the low stress and elastic dielectric is capable of forming at least one of a flexible membrane, an elastic membrane, and a free standing membrane; and (3) the low stress and elastic dielectric layer is selected from the group consisting of an oxide of silicon, a nitride of silicon, silicon dioxide and silicon nitride.
- 92. (Previously Presented) The method of claim 77, wherein the array of exposure cells includes at least one million cells.
- 93. (Previously Presented) The method of claim 77, further comprising providing at least one stress-controlled dielectric layer.
- 94. (Previously Presented) The method of claim 93, wherein the stress of the at least one stress-controlled dielectric layer is less than about 8 x 10^8 dynes/cm².
- 95. (Previously Presented) The method of claim 94, wherein the stress is tensile.
- 96. (Previously Presented) The method of claim 93, wherein the stress of the at least one stress-controlled dielectric layer is 2 to 100 times less than the fracture strength of the at least one stress-controlled dielectric layer.
- 97. (Previously Presented) The method of claim 96, wherein the stress is tensile.

- 98. (Currently Amended) The method of claim 93, wherein the at least one stress-controlled dielectric layer is selected from the group consisting of an oxide of silicon, a nitride of silicon, silicon dioxide and silicon nitride.
- 99. (Previously Presented) The method of claim 93, wherein the at least one stress-controlled dielectric layer is elastic.
- 100. (Previously Presented) The method of claim 93, wherein the at least one stress-controlled dielectric layer is substantially flexible.
- 101. (Previously Presented) The method of claim 93, wherein the at least one stress-controlled dielectric layer is capable of forming at least one of a flexible membrane and a free standing membrane.
- of maskless lithographic pattern generation using an array of exposure cells wherein the exposure cells expose separate areas of a surface to be exposed, further comprising:

providing at least one stress-controlled
dielectric layer; and

providing a plurality of interconnect conductors formed within the at least one stress-controlled dielectric layer.

- 103. (Previously Presented) The method of claim 93, wherein the at least one stress-controlled dielectric layer is formed by multiple RF energy sources.
- 104. (Previously Presented) The method of claim 93, wherein the at least one stress-controlled dielectric layer is formed at a temperature of about $400\,^{\circ}\text{C}$.

- 105. (Currently Amended) The method of claim 77, further comprising providing at least one thinned flexible substrate that has integrated circuits circuitry with active devices formed thereon.
- 106. (Previously Presented) The method of claim 84, wherein the array of exposure cells includes at least one million cells.
- 107. (Previously Presented) The method of claim 84, further comprising providing at least one stress-controlled dielectric layer.
- 108. (Previously Presented) The method of claim 91, wherein the stress is tensile.
- 109. (Previously Presented) The method of claim 84, wherein the stress of the at least one stress-controlled dielectric layer is 2 to 100 times less than the fracture strength of the at least one stress-controlled dielectric layer.
- 110. (Previously Presented) The method of claim 109, wherein the stress is tensile.
- 111. (Currently Amended) The method of claim 107, wherein the at least one stress-controlled dielectric layer is selected from the group consisting of an oxide of silicon, a nitride of silicon, silicon dioxide and silicon nitride.
- 112. (Previously Presented) The method of claim 107, wherein the at least one stress-controlled dielectric layer is elastic.
- 113. (Previously Presented) The method of claim 107, wherein the at least one stress-controlled dielectric layer is substantially flexible.

- 114. (Previously Presented) The method of claim 107, wherein the at least one stress-controlled dielectric layer is capable of forming at least one of a flexible membrane and a free standing membrane.
- 115. (Currently Amended) [[The]] A method of claim 107, further of maskless lithographic pattern generation, the method comprising:

providing an array of exposure cells on a substrate, wherein the exposure cells expose separate areas of a surface to be exposed;

providing a stress-controlled dielectric layer on
the substrate;

providing at least one stress-controlled
dielectric layer; and

providing a plurality of interconnect conductors formed within the at least one stress-controlled dielectric layer.

- 116. (Previously Presented) The method of claim 107, wherein the at least one stress-controlled dielectric layer is formed by multiple RF energy sources.
- 117. (Previously Presented) The method of claim 107, wherein the at least one stress-controlled dielectric layer is formed at a temperature of about 400°C.
- 118. (Currently Amended) The method of claim 84, further comprising providing at least one thinned flexible, wherein the substrate that have has integrated circuits circuitry with active devices formed thereon.
- 119. (New) The method of claim 84, wherein the low stress and elastic dielectric layer is capable of forming at least one of a flexible membrane, an elastic membrane, and a free standing membrane.

120. (New) The method of claim 84, wherein the low stress and elastic dielectric layer is selected from the group consisting of an oxide of silicon, a nitride of silicon, silicon dioxide, and silicon nitride.